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The Political Implications of the Soviet Technological Lag

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SECRET

25X1

THE POLITICAL IMPLICATIONS OF THE SOVIET TECHNOLOGICAL LAG

Soviet officials have focused public attention on the national and international importance they attach to scientific and technological progress. Concurrently, they appear increasingly troubled by the Soviet performance in this area and the possibility that it is not keeping pace with Western advances. An effort to make science and technology the subject of a party central committee plenum is under way. Although the regime's control of debate on such subjects appears intact, the potential "scare" aspect and wide interest in the question of a "technological gap" could make it an explosive political issue.

FACTS BELIE STATED AIMS

In a major speech last December, party leader Brezhnev called the development and utilization of science and technology both a "central economic task" and an "important political task." Earlier the same month Minister of Finance Garbuzov and chairman of the State Planning Committee Baybakov in effect told the Supreme Soviet that growth targets set for 1969 were largely based on an assumed increase in scientific and technical progress.

Official Soviet analysis now defines "the scientific and technological revolution" as the major force reshaping today's world. Thus, Brezhnev in his speech to the International Communist Conference in June agreed with the contention of the conference's main document that this revolution "has become one of the principal sectors of the historic competition between capitalism and socialism." Much Soviet commentary is being devoted to explaining why socialism is better able

than capitalism to foster such a revolution and to reap its benefits. Brezhnev, however, cautioned the conference against underrating the competition of the West and predicted that "the struggle will be a long and difficult one."

In fact, Western analysis indicates that the Soviet Union has not shared in the technological revolution of the postwar period nearly to the extent that the United States, Western Europe, and Japan have. By the mid-1960s the Soviet lag appeared large and possibly growing. Moreover, the reforms that the regime has undertaken since 1965 in planning, incentives, prices, and in research and development have proved to be largely ineffective in speeding the

diffusion of technology throughout the economy. The reforms have not affected the dominant role of central planning, and as a result bureaucratic roadblocks and the lack of incentives for introducing technology remain.*



Brezhnev Addressing the International Communist Conference

SECRET

SECRET

25X1

SHORTCOMINGS WORRY OFFICIALS

Baybakov admitted to the Supreme Soviet in December that the 1968 plan for introducing new equipment had been "substantially underfulfilled" and that the economic reform had not fully achieved the desired results. Last March the Economic Gazette, a weekly of the party's central committee, noted editorially that "somewhat fewer new types of machines, equipment, and instruments were built and manufactured in 1968 than in 1967." The Central Statistical Administration reported in July that, during the first half of 1969, plans for research and for introducing innovations were not fulfilled by "enterprises and organizations of a number of ministries."

The Council of Ministers held two meetings this year to discuss the faltering performance of the Soviet economy. According to official reports, during the first six months industrial production grew 6.9 percent over the first half of 1968. The 1968 gain over 1967, in the same period, was about 9 percent. Labor productivity, which is largely dependent upon technological advance, grew only 4.4 percent compared with an increment of 5.7 percent in the first half of 1968 and the 5.9 percent increase planned for the full year 1969. At the second meeting this summer, the Council ordered all ministers and department heads to study "all questions" connected with labor productivity, to take the necessary measures to speed up the pace of technological development in industry, and to "guarantee" a proper relation between labor productivity and wage rates.

While central authorities continue to tinker with prices, incentives, and planning procedures, regional officials have offered suggestions that seem suited to their own special interests. Republic officials have argued that republic organizations should coordinate and control research and its application to industry. Many local officials,

including those in Leningrad, for example, are pushing enterprise associations and specialization plans of a local character as ways to achieve technical progress. The theme has even crept into other areas of national affairs. Commentaries on youth and education, for example, have repeated Brezhnev's call in March 1968 for a mass movement of youth to attain "the heights of modern science and technology."

A sense of vulnerability on the issue and a desire to find a scapegoat can be seen in a bizarre suggestion in Pravda on 24 July that the number of construction projects in the USSR be cut in half. The proposal was made by Vadim Trapeznikov, deputy chairman of the State Committee for Science and Technology, who has been in the forefront in efforts to hurry the results of research and development into production. Trapeznikov was probably also responsible for a reform of the research system decreed for that purpose in September 1968. His article thus appeared to be an attempt to deflect from research institutes to industry the blame for delays in the introduction of new technology into the production process. He pointed to construction delays caused by spreading investment over too many projects and charged that the ministries failed to implement the September reform of research and development and to fulfill plans on new equipment.

Official concern with a given subject is often expressed ultimately at a central committee plenum on the question, and a plenum on science and technology was reported to be imminent last March. Subsequently Soviet leaders became preoccupied with foreign policy matters, especially the International Communist Conference and relations with China and the West, and a plenum in

Special Report

- 2 -

26 September 1969

SECRET

SECRET

25X1

June took up these subjects. On 4 August candidate member of the Politburo D. A. Kunayev publicly called for a plenum to deal with the subject of science and technology.

WEST'S LEAD RECOGNIZED

The Soviet authorities' anxiety over the problems of technological progress is fueled by their recognition of the successes achieved in the West. Trapeznikov began his article with a glowing description of the attention Western businessmen pay to meeting deadlines and to implementing scientific and economic ideas. This echoed Premier Kosygin's praise of the practices of capitalist monopolies in a speech in Minsk in February 1968, in which he warned that, if assimilation of science and technology were not accelerated, "we can be left behind." Member of the Politburo Kirill Mazurov charged in his speech last November, on the anniversary of the Revolution, that US monopolies "are trying to perpetuate the so-called technological gap" between the socialist countries and the US.

The famed physicist, Petr Kapitsa, in his remarks at a meeting of the presidium of the Academy of Sciences in February 1969, declared that the US and USSR were equals in all spheres except "industrial-technical development" because Soviet labor productivity had not reached the US level.

[redacted] The American Institute under the Soviet Academy of Sciences has established a section for the study of "scientific and technological progress and its consequences." The section head, V. I. Gromeka, told a US Embassy officer that he will concentrate on the "technological gap" and observed that "unfortunately" the gap was widening. M. M. Golan-sky, deputy director of the Central Economics-Mathematical Institute, also told an embassy

officer in August that the technological gap was growing and said, "The US is disappearing beyond the horizon."

A standard Soviet method of trying to catch up with Western technology is to import it. The policy is a matter of some contention among Soviet leaders, however. After Kosygin, in his speech in Minsk in 1968, spoke of the need to "utilize the latest foreign scientific and technical achievements," Brezhnev replied in a speech in Moscow in March that "some workers" were underestimating Soviet achievements and overestimating capitalist ones. Nevertheless, Minister of Foreign Trade Nikolay Patolichev was unusually candid in an interview published by Izvestia on 7 August 1969, when he said it was necessary to import "all that is most modern and advanced" in order to "gain time in solving important economic problems" and to solve the "problems of scientific and technical progress." Soviet eagerness for Western technology was also displayed in the enthusiastic reception this summer of the president of Litton Industries by Soviet officials on the ministerial level.

Another measure of the Soviet leaders' concern with the West's technological superiority is their fear of its effect on the countries of Eastern Europe. Especially since the Czechoslovak reform movement of 1968, Soviet propaganda has stressed the political danger to the USSR's allies of developing close economic ties with the West. An article in New Times just before President Nixon's arrival in Romania in August warned that the West was exploiting Eastern European admiration for Western economic achievements to lure members away from the socialist community, and asserted that the socialist countries have everything necessary to solve their problems themselves. A Soviet economist reported in the Council for Economic Mutual Aid (CEMA) that Gennady Sorokin, then director of the Institute

25X1
25X1

Special Report

- 3 -

26 September 1969

SECRET

SECRET

25X1

of Economics of the World Socialist System, had expressed high-level Soviet views in his articles last winter arguing for economic integration in CEMA. The economist maintained that Soviet proposals for tight integration are based exclusively on political considerations.

Perhaps the most dramatic blow to the USSR in the field of technology was the landing of Apollo 11 astronauts on the moon. Equality or superiority in space has been an important propaganda claim for the Soviets, especially when they have had to acknowledge their inability to manufacture a decent pair of shoes, for example. Propagandists refrained from applying to Luna 15, the Soviet satellite that was orbiting simultaneously with Apollo 11, the stock theme that Soviet space probes are a victory for "socialism"—a theme Brezhnev recited in his speech honoring the crew members of Soyuz 4 and 5 in January 1969. Instead, tributes to American tech-

nology on the occasion of the Apollo 11's success were accompanied by reminders of the Soviet contribution, including early research and Gagarin's first manned space flight. In keeping with this, commentators rather frequently mentioned the desirability of US-USSR cooperation in space endeavors. The president of the Academy of Sciences this summer told astronaut Frank Borman, who expressed the readiness of the US for cooperation, "We are now ready also. We have had certain difficulties but we are ready now." The argumentative air of Soviet press discussions of manned and unmanned probes and of the cost and value of space exploration is suggestive of a general post-mortem on the orientation of the Soviet program.

POLITICAL POSSIBILITIES

The Soviet leaders, by so loudly proclaiming the decisive importance of "the scientific and technological revolution," may be talking themselves into a political trap if they are not able to demonstrate success in this well-defined field of competition. In many ways, in fact, Soviet officials appear skeptical of success and troubled by the prospect of falling further behind in the race. Would-be challengers of the present collective leadership could well find the technology theme a means of calling the leadership to account on the basis of its own statements.

The dilemma that plagues the leaders would confront them directly at a plenum on science and technology. Their reluctance to claim satisfactory technological progress from the economic reform would make it difficult to turn the plenum into a hymn of praise of past achievements. At the same time, because the reform is now officially nearly completed, they can no longer hold it up as the answer and promise for future success in all economic endeavors. The reform's limited measures and experiments related to incentives, pricing, and planning still



Astronaut Frank Borman with the President
of the Soviet Academy of Sciences

Special Report

- 4 -

26 September 1969

SECRET

SECRET

25X1

being carried out are not on a scale corresponding to the task, as the Soviet leaders define it. Attention to these limited measures, however, reveals the authorities' refusal to deal with the roots of the problem. This would mean adopting radical reforms that would enhance the role of market forces to ensure economic rationality at the expense of government and party administration powers.

The leadership has the important advantage of being able to regulate debate on political issues. It may well be able, therefore, to stifle critical discussion of the Soviet Union's technological standing, even if science and technology are made the subject of a plenum. The Politburo has shown it can pre-empt debate with meaningless formality at plenums on contentious issues such as foreign policy and agriculture.

In the case of the technological gap, however, this advantage may be at least partially

offset by the political potential of the issue. Brought to the forefront, it could be devastating to the principal leaders because of its "scare" aspects and because, after the failure of traditional and mildly reformist policies, logic will argue for radical solutions. Because the issue involves patriotic and national security considerations, it could well arouse conservative elements within the military, police, and party and government bureaucracies. A sector of society of growing importance, the scientists and technicians, could be counted on to make their influence felt. Finally, there is a scattering of progressives among most Soviet professions and institutions who, in their efforts to modernize their own fields, would join those pressing for change in the field of technology.

In sum, a constituency is present, an issue is developing, and, given these, an opening for political challenge seems possible.

25X1
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Special Report

- 5 -

26 September 1969

SECRET

Secret

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